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DLR

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| 09/404,654 | 09/24/1999 | THOMAS MULLER | 367.37657X00 | 8635 |

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EXAMINER

ABELSON, RONALD B

ART UNIT PAPER NUMBER

2666

15

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

DLR

Office Action Summary

Application No.

09/404,654

Applicant(s)

MULLER ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 13,17,22,39,60,67,68 and 71-119 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13,22,67,71,75-77,80-84,86-92,94,95,97-103,105-114,116,117 and 119 is/are rejected.
- 7) ☐ Claim(s) 68,72-74,78,79,85,93,96,104,115 and 118 is/are objected to.
- 8) ☐ Claim(s) 17,39 and 60 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Supplemental Amendment

1. The Examiner did not receive the supplemental amendment, dated 7/7/2003, at the time of the last office action, dated 8/28/2003. The amendment modified claims 98 and 103. The Examiner has reviewed the amendment and has determined that the rejection is to be maintained.

Allowable Subject Matter

2. The indicated allowability of claims 13, 22, and 67 is withdrawn in view of the newly discovered reference(s) to Blanchette (US 6,094,429). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13, 22, 67, 71, 75-77, 80-84, 86-92, 94, 95, 97-103, 105-114, 116, 117, and 119 rejected under 35 U.S.C. 103(a) as being unpatentable over Saka (US 5760699), and further in view of Blanchette (US 6,094,429).

Regarding claims 13 and 22, a transmitter/receiver (fig. 1), for transmitting/receiving an intermittent sequence of messages (fig. 2, col. 3 lines 4-8).

The system comprises a control means (fig. 1 box 3, 7, 8) to provide messages for transmission, each of the messages forming part of the sequence of messages (fig. 2) and comprising control information (fig. 2 PREAMBLE, reset, col. 5 lines 26-29) for effecting synchronization (fig. 1 box 4, fig. 2 SC).

Although fig. 1 displays a receiver, it would have been obvious to someone skilled in the art to design a transmitter that produces the features that are processed by the receiver.

Regarding the limitation the control information identifies the messages as broadcasted messages; the base station is broadcasting the signal to all mobiles.

Saka fails to teach the sequence of messages providing timing information, wherein the timing information is dependent

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upon when the transmission of a following message in the sequence occurs.

Blanchette teaches a sequence of messages providing timing information, wherein the timing information is dependent upon when the transmission of a following message in the sequence occurs (fig. 3 box 306, fig. 4 box 402, 404, col. 4 lines 51-54, col. 5 lines 4-9).

Therefore it would have been obvious to one of ordinary skill in the art, having both Saka and Blanchette before him/her and with the teachings [a] as shown by Saka, in a mobile environment a transmitter/receiver, for transmitting/receiving an intermittent sequence of messages, and [b] as shown by Blanchette, a sequence of messages providing timing information, wherein the timing information is dependent upon when the transmission of a following message in the sequence occurs, to be motivated to modify the system of Saka by including a field within the PREAMBLE (fig. 2) to include timing information stating when the current synchronization and paging codes as well as the subsequent PREAMBLE (fig. 2) will occur. This modification can be performed in software. This would improve the system if the base station were required to vary its transmission sequence.

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Regarding claims 67 and 71, a transmitter/receiver (fig. 1), for transmitting/receiving an intermittent sequence of messages (fig. 2, col. 3 lines 4-8), wherein the sequence of intermittent messages are in groups of messages (fig. 2) each group being separated from the next group by a first period of time and including of a plurality of messages in series (fig. 2), each of the plurality of messages in a group being separated from an adjacent message in that group by a second period of time (fig. 2 time duration between elements PREAMBLE, SC, and PAGING), and a control means arranged to provide control messages for transmission (fig. 2 PREAMBLE, reset, col. 5 lines 26-29).

Although fig. 1 displays a receiver, it would have been obvious to someone skilled in the art to design a transmitter that produces the features that are processed by the receiver.

Saka fails to teach the control means informs at least one receiver of a variation in the sequence of intermittent messages, each of the control messages forming part of the sequence of the intermittent message and including control information for effecting synchronization after the variation, including parameters for informing variation in any one or more of the first period of time, the second period of time and the number of messages in the group.

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Blanchette teaches a sequence of messages providing timing information, wherein the timing information is dependent upon when the transmission of a following message in the sequence occurs (fig. 3 box 306, fig. 4 box 402, 404, col. 4 lines 51-54, col. 5 lines 4-9). The examiner equates the applicant's control information informs of a second period of time with Blanchette DCAP informing the mobile of time slot number (Blanchette: col. 5 lines 4-9).

Therefore it would have been obvious to one of ordinary skill in the art, having both Saka and Blanchette before him/her and with the teachings [a] as shown by Saka, in a mobile environment a transmitter/receiver, for transmitting/receiving an intermittent sequence of messages, and [b] as shown by Blanchette, a sequence of messages providing timing information, wherein the timing information is dependent upon when the transmission of a following message in the sequence occurs, to be motivated to modify the system of Saka by including a field within the PREAMBLE (fig. 2) to include timing information stating when the current synchronization and paging codes as well as the subsequent PREAMBLE (fig. 2) will occur. This modification can be performed in software. This would improve the system if the base station were required to vary its transmission sequence.

Regarding claim 83, Saka teaches a receiver (fig. 1) for synchronizing its clock (fig. 1 box 7, 8) substantially every first period of time via an intermittent sequence of messages (fig. 2), transmitted by a transmitter, wherein the sequence of intermittent messages are in groups of messages (fig. 2: PREAMBLE, SC, PAGING), each group being separated from the next group by a first period of time and composing a plurality of messages in series (col. 3 lines 4-8), each message in a group being separated from an adjacent message by a second period of time (fig. 2: intervals between PREAMBLE, SC, PAGING).

The system comprises a control means arranged to control the operation of the receiver in dependence on received ones of the transmitted intermittent sequence of messages, (fig. 1 box 3, fig. 2: PREAMBLE)

The system comprises a clock for providing a time reference to the control means (fig. 1 box 7, 8).

The system comprises a receiver (fig. 1) and synchronization means (fig. 1 box 4), when enabled, to a received message to indicate to the control means the reception of the message (col. 5 lines 31-35).

The system comprises a control means arranged to disable the receiver and synchronization means for a period of time

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dependent upon the intermittent sequence (fig. 3c, col. 8 lines 25-32) and to enable the receiver and synchronization means to receive a message in each of the groups in the sequence (respond to a new preamble, col. 8 lines 32-44).

The system fails to teach a control means arranged to control information indicative of a variation in the sequence of intermittent messages and disable the receive for a variable time period.

Blanchette teaches a variable control means arranged to control the operation of the receiver in dependence of the sequence (DCAP, fig. 3 box 306, fig. 4 box 402, 404, col. 4 lines 51-54, col. 5 lines 4-9).

Therefore it would have been obvious to one of ordinary skill in the art, having both Saka and Blanchette before him/her and with the teachings [a] as shown by Saka, in a mobile environment a transmitter/receiver, for transmitting/receiving an intermittent sequence of messages, and [b] as shown by Blanchette, a sequence of messages providing timing information, wherein the timing information is dependent upon when the transmission of a following message in the sequence occurs, to be motivated to modify the system of Saka by including a field within the PREAMBLE (fig. 2) to include timing information stating when the current synchronization and paging codes as

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well as the subsequent PREAMBLE (fig. 2) will occur. This modification can be performed in software. This would improve the system if the base station were required to vary its transmission sequence.

Regarding claims 94, 114, and 117, Saka teaches a receiver (fig. 1) for synchronizing its clock (fig. 1 box 7, 8) substantially every first period of time via an intermittent sequence of messages (fig. 2), transmitted by a transmitter, wherein the sequence of intermittent messages are in groups of messages (fig. 2: PREAMBLE, SC, PAGING), each group being separated from the next group by a first period of time and composing a plurality of messages in series (col. 3 lines 4-8), each message in a group being separated from an adjacent message by a second period of time (fig. 2: intervals between PREAMBLE, SC, PAGING).

The system comprises a control means arranged to control the operation of the receiver in dependence on received ones of the transmitted intermittent sequence of messages, (fig. 1 box 3, fig. 2: PREAMBLE)

The system comprises a clock for providing a time reference to the control means (fig. 1 box 7, 8).

The system comprises a receiver (fig. 1) and synchronization means (fig. 1 box 4), when enabled, to a received message to indicate to the control means the reception of the message (col. 5 lines 31-35).

The system comprises a control means (fig. 2 PREAMBLE, fig. 1 box 3) is arranged to enable power conservation within the receiver for a period of time dependent upon the intermittent sequence (turn on only during, col. 6 lines 7-11, inoperative conditions, col. 8 lines 25-31), the period of time being such that power conservation is disabled to receive a message in each of the groups of the sequence (reset, col. 5 lines 27-30, col. 7 lines 13-15, preamble detecting operation can be immediately commenced, col. 8 lines 53-56).

Regarding claim 117, the limitation of broadcast synchronization messages, the base station is broadcasting the signal to all mobiles.

Saka fails to teach a variation in the sequence of intermittent messages.

Blanchette teaches a variation in the sequence of intermittent messages (DCAP, fig. 3 box 306, fig. 4 box 402, 404, col. 4 lines 51-54, col. 5 lines 4-9).

Therefore it would have been obvious to one of ordinary skill in the art, having both Saka and Blanchette before him/her

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and with the teachings [a] as shown by Saka, in a mobile environment a transmitter/receiver, for transmitting/receiving an intermittent sequence of messages, and [b] as shown by Blanchette, a sequence of messages providing timing information, wherein the timing information is dependent upon when the transmission of a following message in the sequence occurs, to be motivated to modify the system of Saka by including a field within the PREAMBLE (fig. 2) to include timing information stating when the current synchronization and paging codes as well as the subsequent PREAMBLE (fig. 2) will occur. This modification can be performed in software. This would improve the system if the base station were required to vary its transmission sequence.

Regarding claims 75 and 76, the variation in the sequence of intermittent messages varies the time of transmission of a following message in a following group. This variation would refer to the subsequent PREAMBLE (fig. 2). This subject has been discussed in claim 71 above.

Regarding claim 77, the messages as broadcasted messages, the base station is broadcasting the signal to all mobiles.

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Regarding claims 80, 86, 97, the messages in the intermittent sequence of messages comprise control messages that vary the sequence of intermittent messages, this limitation has previously been addressed by Blanchette. Regarding the limitation, data messages having a payload containing data that do not vary the sequence of intermittent messages (Saka: fig. 2 SC AND PAGING messages).

Regarding claim 81, each group of messages includes a control message, only containing control messages (Saka: fig. 2 PREAMBLE).

Regarding claims 82, 87, 98, a wake-up message (Saka: fig. 2 PREAMBLE) for waking up the at least one receiver from Park Mode to receive a page message (Saka: fig. 2 PAGING).

Regarding claim 84, the control message including parameters for informing variation in any one or more of the first time period, the second time period, and the number of messages in a group. As shown above in claim 83, Blanchette teaches variation in the first time period, the second time period.

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Regarding claim 88, 99, the control means enables the receiver and synchronization means, to receive a following packet in the sequence, for a predetermined duration (fig. 1 box 3, 7, 8).

Regarding claim 89, 100, the control in the absence of an indication from the receiving and synchronizing means that a message has been received, re-enables the receiver and synchronization means to receive a following message (the preamble detection operation can be immediately commenced, col. 8 lines 45-56).

Regarding claims 90, 101, control means enables the receiver and synchronization means (fig. 1 box 4), to receive a message in the sequence (fig. 2), for a predetermined duration and in the absence of an indication from the synchronization means that a due message has been received, re-enables the receiver and synchronization means to receive a following message in the same group (fig. 3a, sync code cannot be detected, the sync code detecting operation is again carried out, col. 8 45-66).

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Regarding claims 91, 102, control means enables the receiver and synchronization means (fig. 1 box 4), to receive a message in the sequence (fig. 2), for a predetermined duration and in the absence of an indication from the synchronization means that a due message has been received, re-enables the receiver and synchronization means to receive a following message in the same group (the preamble detection operation can be immediately commenced, col. 8 lines 45-56).

Regarding claims 92 and 103, the control means reenablement is intermittent (turn on only during, col. 6 lines 7-11, inoperative conditions), the interval between enablement depending upon the second time period for the group. Regarding the interval, the sum of the second time period plus the SC and PAGING codes is the time between the end of the current PREAMBLE and the start of the next PREAMBLE. As stated above, Saka is searching for PREAMBLE (col. 5 lines 26-29).

Regarding claim 95, the variation in the sequence of intermittent messages is communicated to the receiver by a control message. As previously stated in claim 94, the control information would be placed in the PREAMBLE.

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Regarding claims 105 - 107, transmitters and receivers are computing devices.

Regarding claims 108 - 113, 116, and 119, mobile telephones are transceivers.

Allowable Subject Matter

5. Claims 17, 39, and 60 are allowed.

6. Claims 68, 72-74, 78, 79, 85, 93, 96, 104, 115, and 118 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter.

Regarding claims 17, 39, 60, 78, 93, 104, 115, and 118 nothing in the prior art of the record teaches or fairly suggests the control means is arranged to vary the time between the transmission of a pair of successive groups of messages by an amount such that there is coincidence between the time of transmission of a message in the following group of the pair and the expected time of transmission, in the absence of a

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variation, in combination with all the other limitations listed in the claim.

Regarding claims 68, 74, 85, and 96, nothing in the prior art of the record teaches or fairly suggests a parameter specifying the number of messages in each group after the variation, in combination with all the other limitations listed in the claim.

Regarding claim 72, nothing in the prior art of the record teaches or fairly suggests the control information is provided in each of the sequential messages of one group, in combination with all the other limitations listed in the claim. Note, Saka teaches control information in the PREAMBLE only (fig. 2: PREAMBLE).

Response to Arguments

7. Applicant's arguments, see pg. 22-24, filed 5/19/2003, with respect to the rejection(s) of claim(s) 13, 22, 67, 71, 75-77, 80-84, 86-92, 94, 95, 97-103, 105-114, 116, 117 and 119 have been fully considered and are persuasive. Therefore, the rejection has

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been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Saka and Blanchette.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

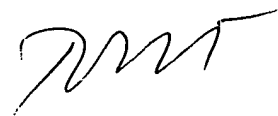
RA
Ronald Abelson
Examiner
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October 8, 2003

A handwritten signature in black ink, appearing to be 'DANTON', written in a cursive style.

DANTON
PRIMARY EXAMINER